ASSISTANT SECRETARY OF DEFENSE

WASHINGTON, D.C. 20301-3040

November 12, 1993

COMMAND, CONTROL,
 COMMUNICATIONS
        AND
 INTELLIGENCE

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
                CHAIRMAN OF THE JOINT CHIEFS OF STAFF
                UNDER SECRETARIES OF DEFENSE
                DIRECTOR, DEFENSE RESEARCH AND ENGINEERING
                ASSISTANT SECRETARIES OF DEFENSE
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SUBJECT: Selection of Migration Systems

        This memorandum provides the generic evaluation criteria to be used in selection of migration systems as required by the Deputy Secretary of Defense (DepSecDef) memorandum of 13 October 1993, "Accelerated Implementation of Migration Systems, Data Standards, and Process Improvement." The Department of Defense (DoD) must improve the quality and effectiveness of information support for our fighting forces, reduce the cost of duplicative processes, eliminate nonessential legacy systems in all functional areas, and minimize the cost and difficulty of information systems technical integration. Information systems are comprised of applications, data and infrastructure. Expedited selection of migration systems h as been established by the Deputy Secretary of Defense as a matter of urgency throughout the DoD. Selection shall be based on these four factors:

        ·   **Functional:** To be selected as a migration system, the information system will

have to be based on defined work processes and will have to be based on the degree to which the system meets the information needs of users within and across functional areas. A decision should be generally supported by the functional user community within the DoD Components, including the Chairman, Joint Chiefs of Staff (CJCS) representing-the unified combatant commands.

·   **Technical:** The system can evolve (migrate) to be supported by the integrated, standards-based architecture prescribed for the future Defense Information Infrastructure (DII).

·   **Programmatic:** A functional economic analysis that documents a reasonable range of alternatives that meet both functional and technical objectives is required. The alternatives must be within programmatic constraints (resources, schedules,

and acquisition strategy), and justify adopting the migration system to the Department. Given the compressed time frames, the PSAs may elect to base their migration decision on an abbreviated functional economic analysis. Acquisition strategy planning factors will be considered in accordance with Acting ASD(C3I) memorandum of February 4, 1993, "Acquisition Strategy Planning for Corporate Information Management (CIM) Migration Systems."

·   **Data:** The ability to transition to data standards is a fundamental requirement for an information system in order for it to be selected as a migration system. Applications should lend themselves to data sharing within their design. Migration plans must include transition to DoD standard data and shared data concepts.

Migration system selection procedures and factors are discussed in our Interim Management Guidance on Functional Process Improvement (August 5, 1992, and January 15, 1993). Except where exempted under DoD Directive 8120.1, Section B, the selection procedures apply to all AISs in the Department. This includes all Command, Control,, Communications, and Intelligence (C3I) systems except those specifically and individually exempted by me in accordance with my DoD Senior Information Management (IM) authority under DoD Directives 5137.1 and 8000.1. All information technology services shall be transitioned to the selected migration systems over a period not to exceed three years, and the legacy systems providing these services shall be terminated. Any funding for development, modernization, or enhancement of these legacy systems requires the approval of the DoD Senior IM Official, in accordance with the DepSecDef's memorandum of October 13, 1993. Life-cycle management reviews of migration systems shall also address these candidate legacy systems and data until their termination.

    Migration system selection shall be made by the Office of the Secretary of Defense (OSD) Principal Staff Assistant(s) (PSAs), or CJCS, having functional

responsibility for the missions and functions supported by the **system,** with the participation of affected DoD Components. The choice of functional criteria guidance in the selection of migration systems is the responsibility of the PSAs/CJCS. As the DoD Senior IM Official,, I shall approve the proposed selection, based on my review of the selecting officials evaluation of technical, programmatic, and data factors. Because technical factors are critical to successful implementation of the DII, I shall have additional studies conducted where appropriate, and I shall withhold my approval where significant issues remain unresolved. Disagreements shall be resolved in accordance with DoD Directive 8000.1, Section E.l.d.

Attached to this memorandum are key technical considerations that must be addressed in the selection process. Assistance in your selection of migration systems and in preparation of the appropriate documentation is available through the Defense Information Systems Agency Center for Integration and Interoperability. If you would like this assistance, please contact Dr. Michael Mestrovich at (703) 756-4740.

Emmett Paige, Jr.

Attachment

Key Technical Factors to be Considered
in the Selection of Migration Systems

Technical Factors

Extent to which the candidate legacy automated information system (including Comma-nd, Control, Communications and Intelligence (C3I) systems) currently conforms to, or can evolve (migrate) to conformance with, the open systems environment and standards based architecture defined by the DoD Technical Architecture Framework for Information Management (TAFIM)l.

Difficulty, cost, and time line for migrating the system (including its applications, data, and supporting infrastructure) as expeditiously as possible from its current technical environment to conformance with:

·   The TAFIM.

·   DoD standard data, based on the DoD Data Model. The DoD Data Model is a principal component of the DoD Enterprise Model.

·   Shared use of applications, databases, and the computing and communications infrastructure with other designated migration systems.

·   Cost effective, timely, secure, and highly reliable support to all functional users from consolidated data processing facilities.

Timeliness, completeness, and availability of life-cycle management and supporting documentation, particularly including data and application software documentation.

Difficulty, cost, and time line for application of:

·   DoD information technology utility services.

·   Commercial-off-the-shelf (COTS) software, and portable, re-usable software modules.

·   Ada and computer aided software engineering (CASE) tools and methods.

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1   **Office of the Assistant Secretary of Defense (c3I) memorandum, "Interim Management Guidance on the Technical Architecture Framework for Information Management (TAFIM)," January 15, 1993.**
 Current and future interface, interoperability, and integration requirements with other systems and databases within and across all DoD functional activities and functional areas.

Application of Technical Factors

Application of these technical factors results in giving preference to systems that:

·   Have been developed using Ada and other "state of the industry" software engineering best practices, are well documented, and are under good configuration control.

·   Use current COTS information technology software and hardware, such as data dictionaries and data base management systems, optical disk technology, etc.

·   On the whole, are more compliant rather than less compliant with the technical factors listed above, and apply those factors consistently across all systems supporting the functional area.

Assessment and Plans

The selection of a candidate migration AIS must be founded on its functional and technical adequacy. migration assessment includes a technical analysis of migration candidate systems to ensure legacy applications will meet the information requirements of the functional user and that has the ability to accommodate subsequent functional and technical improvement activities.

A migration plan consisting of functional, technical and data concerns, with programmatic considerations is the start of the process for selecting migration systems. The DoD "Tree" diagrams, a quarterly publication from DISA/Center for Integration and Interoperability, displays each functional areas decisions for integrating. These "Tree" diagrams will be completed by all functional areas with target dates to depict the Enterprise Integration. The diagrams present an important migration picture but stop short of the migration planning that is necessary for implementation. The DISA/Center for Integration and Interoperability is available to help each functional area develop migration plans and assess technical cross-functional integration for the Enterprise.

To validate the technical sufficiency of a candidate migration system, the applications should be evaluated in terms of relevant functional, technical, data handling, and programmatic criteria.